

# **WMS1 / WMS2**

## **User Manual**

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#### Europe Energy Saving Notice

#### Energy Saving Matters (EuP 2009/125/EC)

Saving electric energy is a key to help protecting the environment. Please turn off all electrical products when they are not in use. To avoid power consumption in idle mode, disconnect all electrical equipment from power when not in use. Thank you!

#### DOCUMENT VERSION



Due to additional product features and/or enhancements, an updated version of this document may be available online.

Please check [www.adj.com](http://www.adj.com) for the latest revision/update of this manual before beginning installation and/or programming.

Date	Document Version	Software Version	DMX Channels	Notes
01/25/2024	1.0	N/A	Not Applicable	Initial Release.
10/15/2024	1.1	N/A	Not Applicable	Updated Dims.
03/17/2025	1.2	N/A	Not Applicable	Added WMS1; Updated Technical Specifications

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# GENERAL INFORMATION

## INTRODUCTION

Please read and understand the instructions in this manual carefully and thoroughly before attempting to operate this device. These instructions contain important safety and use information.

Discover the cutting-edge ADJ WMS1/WMS2 LED Video Panel – a pinnacle in high-resolution display technology designed for seamless integration into diverse projects. Expanding ADJ's professional LED video panel portfolio, the WMS1/WMS2 stands out as the company's highest resolution offering to date. Perfectly suited for integration applications, including shop window displays, museums, boardrooms, digital signage, and entertainment venues, this video panel is a versatile solution for immersive visual experiences.

With a wide viewing angle of 160-degrees (horizontal) by 140-degrees (vertical) and a rapid refresh rate of 3840Hz, this video panel ensures a captivating and smooth visual performance.

Measuring 39.3" x 19.9" (1000mm x 500mm), the WMS1/WMS2 consists of eight individual modules, each with 96 x 96 pixels, offering flexibility in arrangement. The panel's frame assembly features a secure locking mechanism, allowing for the seamless joining of adjacent panels. Installation is simplified with mounting points for direct wall installation. The front-serviceable design enables easy module replacement, ensuring uninterrupted operation.

With a slim 1.3" (33mm) thickness and a weight of 21 lbs. (9.5 kgs.), the WMS1/WMS2 is a lightweight and compact solution. Its versatility extends to wall-mounting, hanging, or stacking, catering to various installation preferences. Join the LED video panel revolution with ADJ's crystal clear, and incredibly vibrant WMS1/WMS2.

## UNPACKING

Every device has been thoroughly tested and has been shipped in perfect operating condition. Carefully check the shipping carton for damage that may have occurred during shipping. If the carton is damaged, carefully inspect the device for damage, and be sure all accessories necessary to install and operate the device have arrived intact. In the event that damage has been found or parts are missing, please contact our customer support team for further instructions. Please do not return this device to your dealer without first contacting customer support. Please do not discard the shipping carton in the trash. Please recycle whenever possible.

# GENERAL INFORMATION

**Customer Support:** Contact ADJ Service for any product related service and support needs. Also visit [forums.adj.com](http://forums.adj.com) with questions, comments or suggestions.

**Parts:** To purchase parts online visit:

<http://parts.adj.com> (US)

<http://www.adjparts.eu> (EU)

**ADJ SERVICE USA - Monday - Friday 8:00am to 4:30pm PST**

**Voice: 800-322-6337 | Fax: 323-582-2941 | support@adj.com**

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**WARNING!** To prevent or reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture!

**CAUTION!** There are no user serviceable parts inside this unit. Do not attempt any repairs yourself, as doing so will void your manufacturer's warranty. In the unlikely event your unit may require service, please contact ADJ Products, LLC.

Do not discard the shipping cartoon in the trash. Please recycle when ever possible.

# LIMITED WARRANTY (USA ONLY)

- A. ADJ Products, LLC hereby warrants, to the original purchaser, ADJ Products, LLC products to be free of manufacturing defects in material and workmanship for a prescribed period from the date of purchase (see specific warranty period on reverse). This warranty shall be valid only if the product is purchased within the United States of America, including possessions and territories. It is the owner's responsibility to establish the date and place of purchase by acceptable evidence, at the time service is sought.
- B. For warranty service, you must obtain a Return Authorization number (RA#) before sending back the product-please contact ADJ Products, LLC Service Department at 800-322-6337. Send the product only to the ADJ Products, LLC factory. All shipping charges must be pre-paid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, ADJ Products, LLC will pay return shipping charges only to a designated point within the United States. If the entire instrument is sent, it must be shipped in its original package. No accessories should be shipped with the product. If any accessories are shipped with the product, ADJ Products, LLC shall have no liability whatsoever for loss of or damage to any such accessories, or for the safe return thereof.
- C. This warranty is void if the serial number has been altered or removed; if the product is modified in any manner which ADJ Products, LLC concludes, after inspection, affects the reliability of the product, if the product has been repaired or service by anyone other than ADJ Products, LLC factory unless prior written authorization was issued to purchaser by ADJ Products, LLC; if the product is damaged because not properly maintained as set forth in the instruction manual.
- D. This is not a service contact, and this warranty does not include maintenance, cleaning or periodic check up. During the period specified above, ADJ Products, LLC will replace defective parts at its expense with new or refurbished parts, and will absorb all expenses for warrant service and repair labor by reason of defects in material or workmanship. The sole responsibility of ADJ Products, LLC under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of ADJ Products, LLC. All products covered by this warranty were manufactured after August 15, 2012, and bear identifying marks to that effect.
- E. ADJ Products, LLC reserves the right to make changes in design and/or improvements upon its products without any obligation to include these changes in any products theretofore manufactured.
- F. No warranty, whether expressed or implied, is given or made with respect to any accessory supplied with products described above. Except to the extent prohibited by applicable law, all implied warranties made by ADJ Products, LLC in connection with this product, including warranties of merchantability or fitness, are limited in duration to the warranty period set forth above. And no warranties, whether expressed or implied, including warranties of merchantability or fitness, shall apply to this product after said period has expired. The consumer's and/or Dealer's sole remedy shall be such repair or replacement as is expressly provided above; and under no circumstances shall ADJ Products, LLC be liable for any loss or damage, direct or consequential, arising out of the use of, or inability to use, this product.
- G. This warranty is the only written warranty applicable to ADJ Products, LLC Products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

## LIMITED WARRANTY PERIODS

- **Non L.E.D. Lighting Products = 1-year (365 days) Limited Warranty** (Such as: Special Effect Lighting, Intelligent Lighting, UV lighting, Strobes, Fog Machines, Bubble Machines, Mirror Balls, Par Cans, Trussing, Lighting Stands etc. excluding LED and lamps)
- **Laser Products = 1 Year (365 Days) Limited Warranty** (excludes laser diodes which have 6 month limited warranty)
- **L.E.D. Products = 2-year (730 days) Limited Warranty** (excluding batteries which have a 180 day limited warranty)  
Note: 2 Year Warranty only applies to purchases within the United States.
- **StarTec Series = 1 Year Limited Warranty** (excluding batteries which have a 180 day limited warranty)
- **ADJ DMX Controllers = 2 Year (730 Days) Limited Warranty**

# SAFETY GUIDELINES

This device is a sophisticated piece of electronic equipment. To guarantee smooth operation, it is important to follow all instructions and guidelines in this manual. ADJ is not responsible for injury and/or damages resulting from the misuse of this panel due to the disregard of the information printed in this manual. Only qualified and/or certified personnel should perform the installation of this panel and all included rigging parts and/or accessories. Only the original included rigging parts and/or rigging accessories for this panel should be used for proper installation. Any modifications to the panel, including to rigging and/or accessories, will void the original manufacturer's warranty and increase the risk of damage and/or personal injury.



**PROTECTION CLASS 1 - PANEL MUST BE PROPERLY GROUNDED.**



**THERE ARE NO USER SERVICEABLE PARTS INSIDE THIS PANEL. DO NOT ATTEMPT TO PERFORM ANY REPAIRS BY YOURSELF, AS DOING SO WILL VOID YOUR MANUFACTURER'S WARRANTY. DAMAGES RESULTING FROM MODIFICATIONS TO THIS PANEL AND/OR THE DISREGARD OF SAFETY INSTRUCTIONS AND GUIDELINES IN THIS MANUAL VOID THE MANUFACTURER'S WARRANTY AND ARE NOT SUBJECT TO ANY WARRANTY CLAIMS AND/OR REPAIRS.**



**DO NOT PLUG PANEL INTO A DIMMER PACK!  
NEVER OPEN THIS PANEL WHILE IN USE!  
UNPLUG POWER BEFORE SERVICING PANEL!  
NEVER TOUCH FRONT OF PANEL DURING OPERATION, AS IT MAY BE HOT! KEEP FLAMMABLE MATERIALS AWAY FROM PANEL.**



**INDOOR / DRY LOCATIONS USE ONLY!  
DO NOT EXPOSE PANEL TO RAIN AND/OR MOISTURE!  
DO NOT SPILL WATER AND/OR LIQUIDS ON OR INTO THE PANEL!**

# SAFETY GUIDELINES

- **DO NOT** touch panel housing during operation. Turn OFF power and allow approximately 15 minutes for panel to cool down before servicing.
- **DO NOT** operate devices with covers open and/or removed.
- **DO NOT** shake panel, and avoid brute force when installing and/or operating.
- **DO NOT** expose any part of the panel to open flame or smoke. Keep panel away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
- **DO NOT** install/use in extremely hot/humid environments, or handle without ESD precautions.
- **DO NOT** operate if ambient temperature falls outside of this range **-20°C to 40°C (-4°F to 104°F)**, as doing so will result in damage to the device.
- **DO NOT** operate if power cord is frayed, crimped, damaged, and/or if any of the power cord connectors are damaged and do not insert into the panel securely and with ease.
- **NEVER** force a power cord connector into the panel. If the power cord or any of its connectors are damaged, replace immediately with a new cord and/or connector of the same power rating.
- **DO NOT** block air ventilation slots/vents. All fan and air inlets must remain clean and never blocked.
- Allow approximately 6" (15cm) between panel and other devices or a wall for proper cooling.
- **ALWAYS** disconnect panel from main power source before performing any type of service and/or cleaning procedure.
- Only handle the power cord by the plug end, and never pull out the plug by tugging the wire portion of the cord.
- **ONLY** use the original packaging materials and/or case to transport the panel in for service.
- **PLEASE** recycle shipping boxes and packaging whenever possible.
- To avoid causing physical damage, read the installation instructions carefully before installation.
- Panels should be installed/operated by qualified and trained professionals **ONLY**.
- Always mount panels in a safe and stable manner.
- **INDOOR / DRY** location use **ONLY!** Outdoor use will void the manufacturer's warranty.
- Wear appropriate safety equipment during panel installation.
- Turn **OFF** power to panel, computers, servers, system boxes, and monitors before making any type of power or data connections and before performing any maintenance work.
- Electronics used in this panel are ESD (Electrostatic Discharge) sensitive. To protect device from ESD, wear a grounded ESD wrist strap or similar grounding device when handling panel.
- Panel must be properly grounded before operating. (resistance must be less than  $4\Omega$ )
- Ensure all power is disconnected from panel before unplugging any data cables from the panel, especially serial line ports.
- Route power and data cables so that they are **NOT** likely to be walked on or pinched.
- If panels are not in regular use for an extended period, it is advised to test run the devices for 2 hours each week to ensure that they remain in proper working condition.
- Cases used to transport panel must me properly waterproofed for transportation.

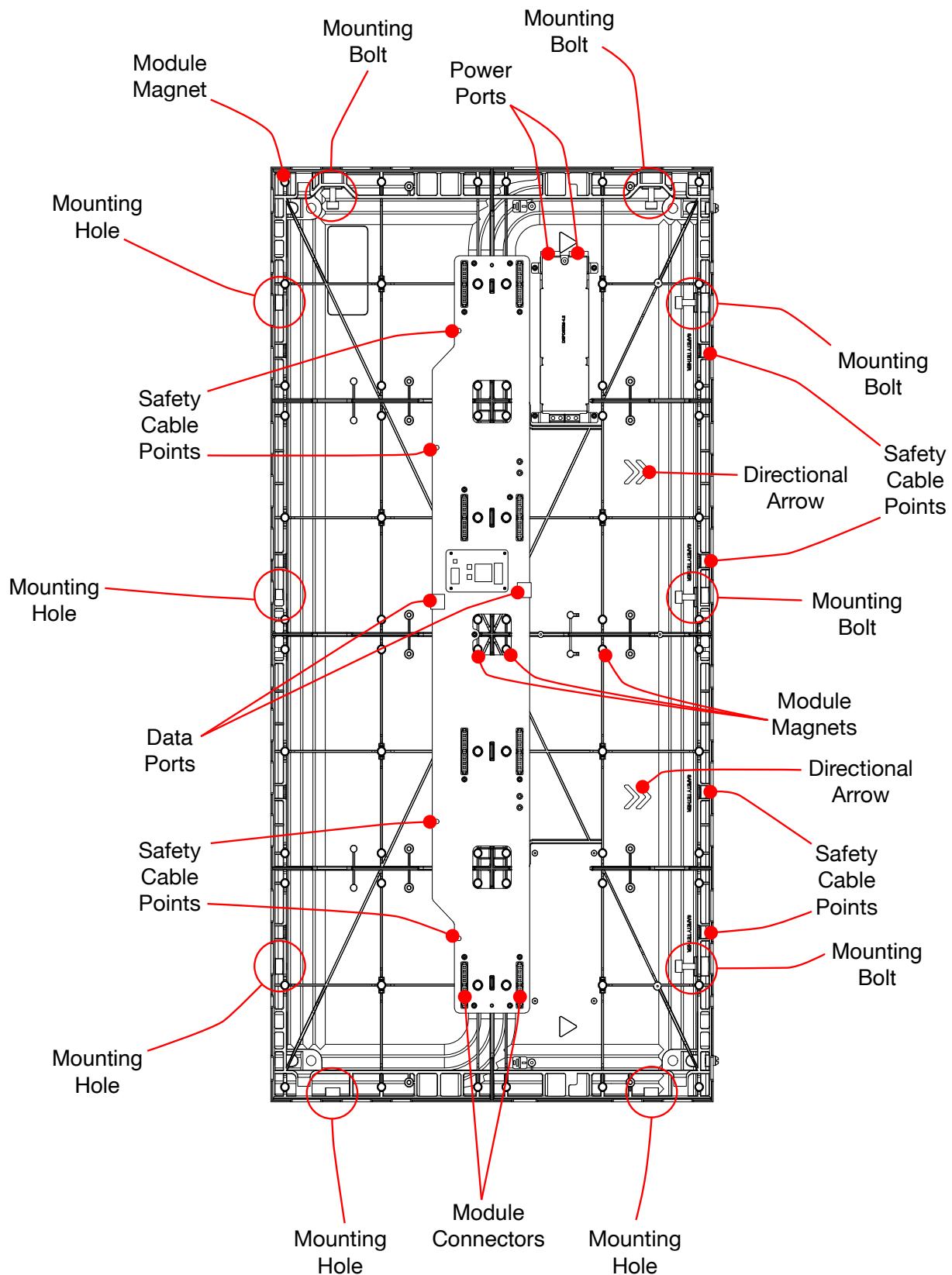
# MAINTENANCE GUIDELINES

- Careful and regular maintenance is necessary to optimize the potential functional lifespan of the video panels.
- Read the installation and operation instructions for correct operation of the video panels.
- Although the video panels are designed and built to withstand some impact forces when installed correctly, care should still be taken to avoid impact damage when handling or transporting them, especially at or near the corners and edges of the devices, which are particularly susceptible to damage during transportation.
- The fixture should be serviced by a qualified service technician when:
  - A. Objects have fallen onto, or liquid has been spilled into, the fixture
  - B. The fixture has been exposed to rain or water conditions in excess of IP rating parameters for an IP20 device. This includes exposure from the front, rear, or side of the panels.
  - C. The fixture does not appear to operate normally or exhibits a marked change in performance.
  - D. The fixture has fallen and/or has been subjected to extreme handling.
- Check each video panel for loose screws and other fasteners.
- If the video panel installation is fixed or displayed for a lengthy time, regularly inspect all rigging and installation equipment, and replace or repair as necessary.
- During long periods of non-use, disconnect the main power to the unit.
- Use necessary ESD (electrostatic discharge) precautions when handling video panels, especially the LED screens, as they are ESD sensitive and easily damaged from ESD exposure.
- The Null Line and Live Line connections from the computer and control system cannot be reversed and should therefore only be connected in original layout order.
- If the GFI (Ground Fault Interrupt) breaker-switch trips often, check the display or replace the power-supply switch.
- **When operating the video panels, power up the computer before powering up the video panels. Conversely, when shutting down after operation, turn the video panels off before turning off the computer. If the computer is turned off while the panels are still powered on, a high intensity spike of brightness may occur, resulting in catastrophic damage to the LEDs.**
- If a circuit shorts out, a breaker-switch trips, wires burn, and or any other abnormality appears while conducting an electrical test, discontinue testing, and troubleshoot units to find the problem before continuing with any testing or operation.
- To ensure consistent operation, it might be necessary to learn operating parameters for installation, data recovery, backup, controller settings, and basic data preset modification.
- Regularly check computer for any viruses and remove any irrelevant data.
- Only a qualified technician should operate software system.
- Remove any moisture found inside or outside of any video panels before dismantling video installation and returning them to their optional flight cases (sold separately). Ensure flight cases are free of any moisture, using a fan to dry them if necessary, and avoid frictional contact that may result in ESD generation when returning video panels to the flight cases.
- The video panels are designed for indoor use only, within its IP20 rating parameters (front / rear). Limit or remove any unit exposed to moisture, condensation, or humidity, and consider using air conditioning where available.
- When not in use, store video panels in a dry, well ventilated facility.

## OVERVIEW

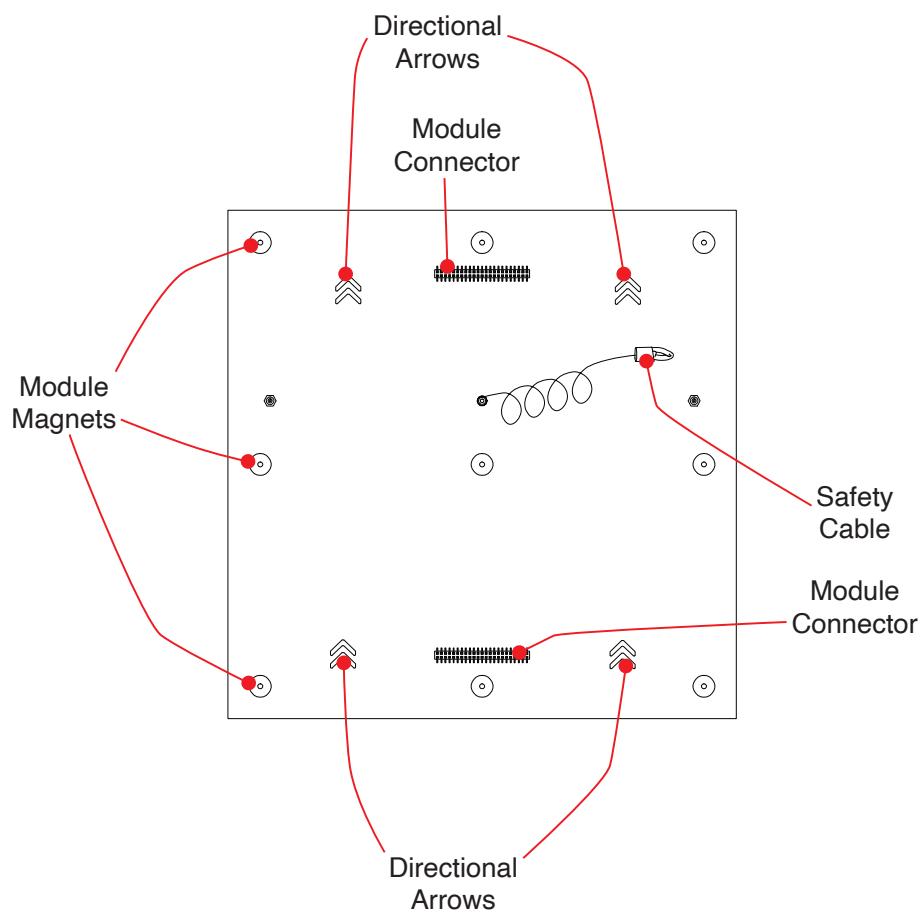
## VIDEO PANEL

Please note: Video panel is shown rotated 90 degrees in order to fit this page. During actual installation, the video panel should always be oriented so that the directional arrows are pointed upwards.



# OVERVIEW

## LED PANEL



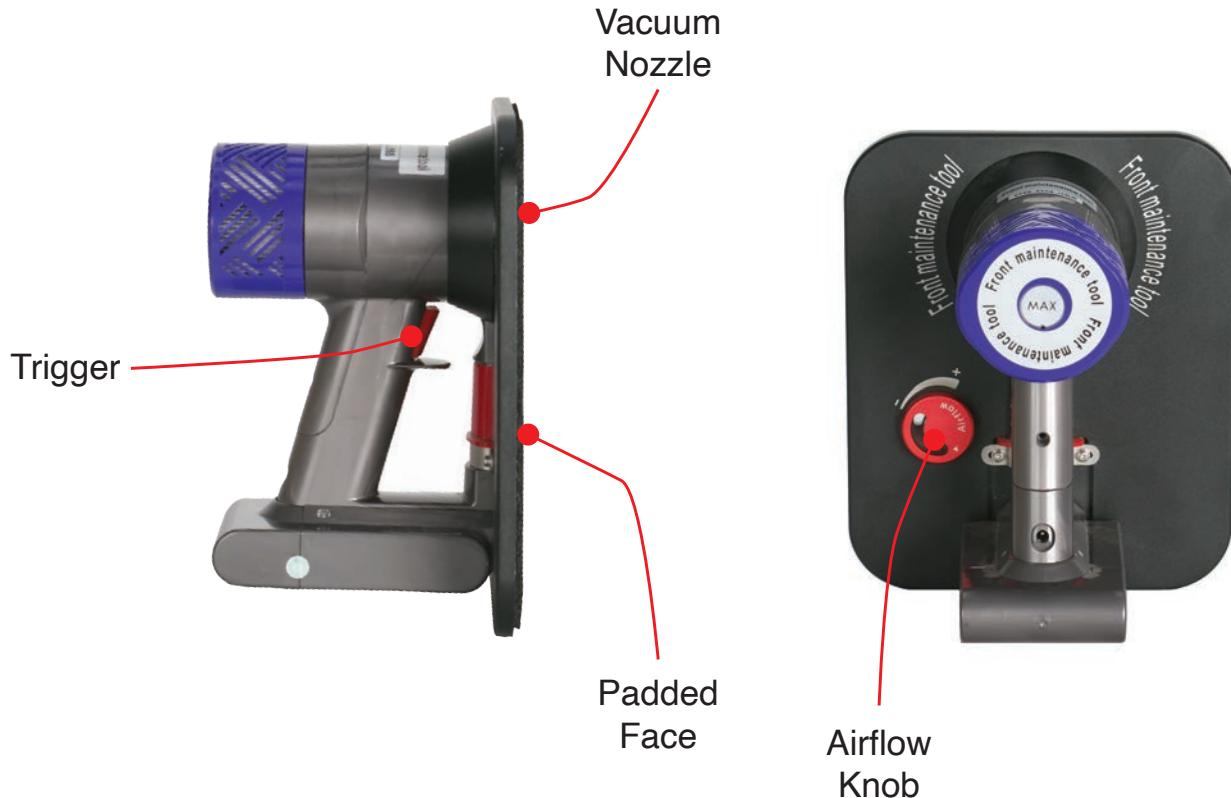
# HANDLING AND TRANSPORTATION

## ELECTROSTATIC DISCHARGE (ESD) PRECAUTIONS

Because these are ESD sensitive units, ESD precautions must be observed when removing the video panels from their flight case (ESD gloves, protective clothing, wrist straps, etc.). In addition to using standard ESD precautions, in order to reduce static building friction, take care to lift the panels without rubbing the LED panel surface along the foam-covered slots, which can generate static electricity that can damage LEDs.

# VACUUM MODULE REMOVAL TOOL

A technician can use the optional **Vacuum Module Removal Tool** (ADJ part number *EVSVAC*, sold separately) to safely remove and reinstall any of the eight LED Modules in the video panel, and minimize potential damage from mishandling, ESD exposure, or other issues.



The airflow adjustment knob can be rotated to adjust the amount of vacuum suction force exerted by the tool. Turn the knob clockwise to increase suction force, or counter-clockwise to decrease suction force.



**The face of the tool is padded to cushion against damaging the LED modules. Nevertheless, use caution and do not use excessive force when pressing the vacuum tool against the LED module.**

# INSTALLATION



**DO NOT INSTALL THE PANEL IF YOU ARE NOT QUALIFIED TO DO SO!  
INSTALLATION BY QUALIFIED TECHNICIANS ONLY!  
INSTALLATIONS SHOULD BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE A YEAR!**



## FLAMMABLE MATERIAL WARNING

Keep panel(s) a minimum of 5.0 feet (1.5m) away from flammable materials and/or pyrotechnics.



## ELECTRICAL CONNECTIONS

A qualified electrician should be used for all electrical connections and/or installations.



**A MAXIMUM OF 15 PANELS** may be suspended from each other in a vertical column. There is no limit on the number of panels that may be installed in a single horizontal row. Always consult a professional equipment installer to verify that your mounting surface or structure is certified to support the weight of the panels and any associated accessories or cables. Note that additional processing power may be necessary to operate larger quantities of panels.



**USE CAUTION WHEN POWER LINKING PANELS OF DIFFERENT MODEL TYPES, AS POWER CONSUMPTION CAN VARY WITH MODEL TYPE, AND MAY EXCEED THE MAX POWER OUTPUT OF THIS PANEL. CONSULT THE SILK SCREEN FOR MAX CURRENT RATING.**

<b>Input Power</b>	<b>1100W (110V), 2200W (220V)</b>
<b>Output Power</b>	<b>800W (110V), 2000W (220V)</b>
<b>Average Power Consumption</b>	<b>200W</b>

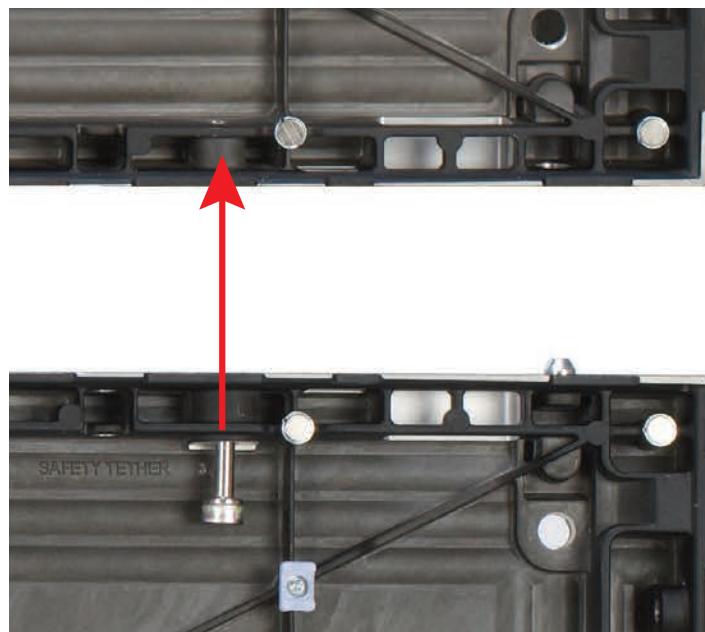
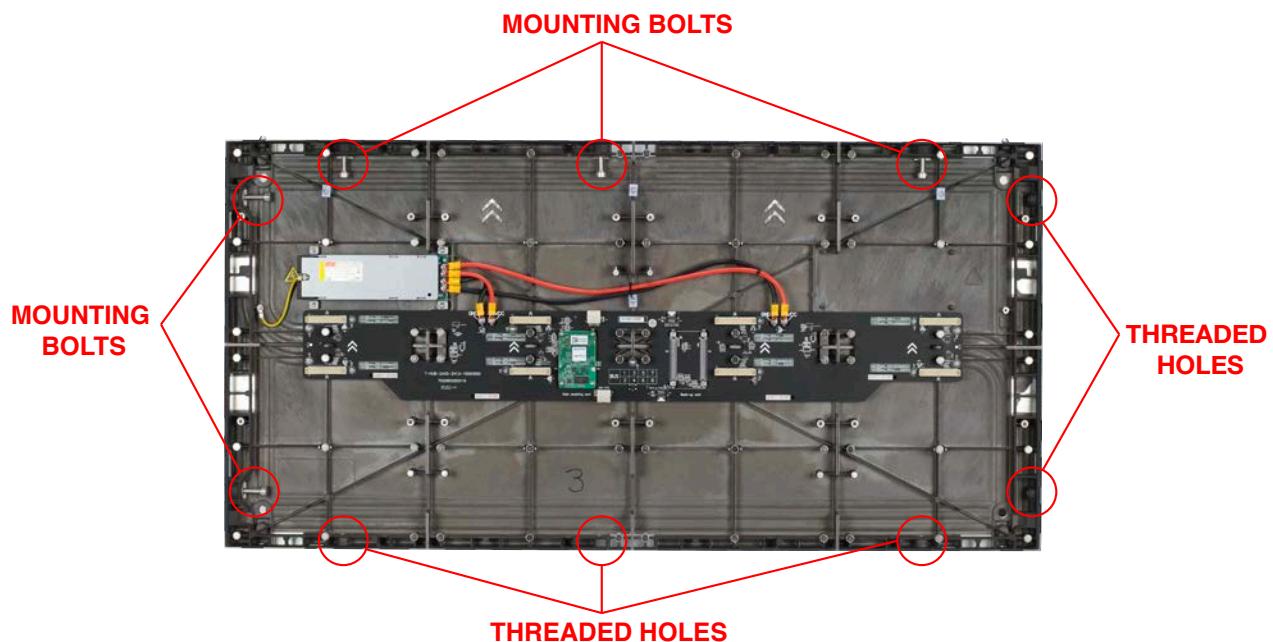
- **WARNING!** The safety and suitability of any lifting equipment, installation location/platform, anchoring/rigging/mounting method and hardware, and electrical installation is the sole responsibility of the installer.
- Panel(s) and all panel accessories and all anchoring/rigging/mounting hardware **MUST** be installed following all local, national, and country commercial electrical and construction codes and regulations.
- Before rigging/mounting a single panel or multiple interconnected panels to any metal truss/structure, a professional equipment installer **MUST** be consulted to determine if the metal truss/structure or surface is properly certified to safely hold the combined weight of the panels(s), clamps, cables, and all accessories.
- Inspect metal truss/structure visually to ensure it does not flex and/or become deformed due to the weight of the panel(s). Damage caused to panel(s) by mechanical stress is not covered by warranty.
- Panel(s) should be installed in areas outside walking paths, seating areas, and areas where unauthorized personnel might reach the panel(s) by hand. Access under work area must be blocked.
- **NEVER** stand directly below the panel(s) when rigging, removing, or servicing.
- **OVERHEAD RIGGING:** Overhead fixture installation must always be secured with a secondary safety attachment, such as an appropriately rated safety cable. Overhead rigging requires extensive experience, including calculating working load limits, knowledge of the installation material being used, and periodic safety inspection of all installation material and the fixture itself, among other skills. If you lack these qualifications, do not attempt the installation yourself. Improper installation can result in bodily injury and property damage.

# INSTALLATION: VIDEO PANEL ASSEMBLY

Each video panel consists of a rigid rear shell that houses the unit's electronic and mounting hardware, as well as 8 magnetically attached LED modules. Follow the instructions below to assemble your panel(s). **A qualified technician or trained professional is required to assemble the panels.**

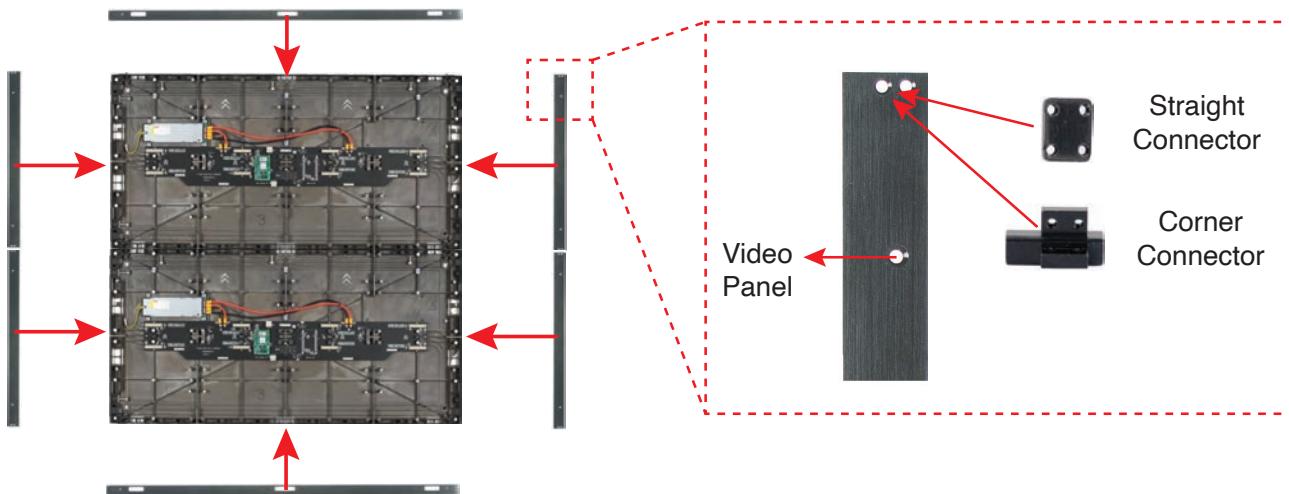
1. If your assembly includes multiple video panels, begin by physically linking all your video panels together.

Each video panel features male mounting bolts along the top edge and left hand edge (when viewed from the front) of the panel, and female threaded holes along the bottom edge and right hand edge. Use these mating fasteners to connect your video panels together, making sure that the arrows marked on each panel are pointing upwards. The maximum number of panels that can be linked is 15 panels in the vertical direction. There is no limit on the number of panels that can be linked in the horizontal direction.



# INSTALLATION: VIDEO PANEL ASSEMBLY

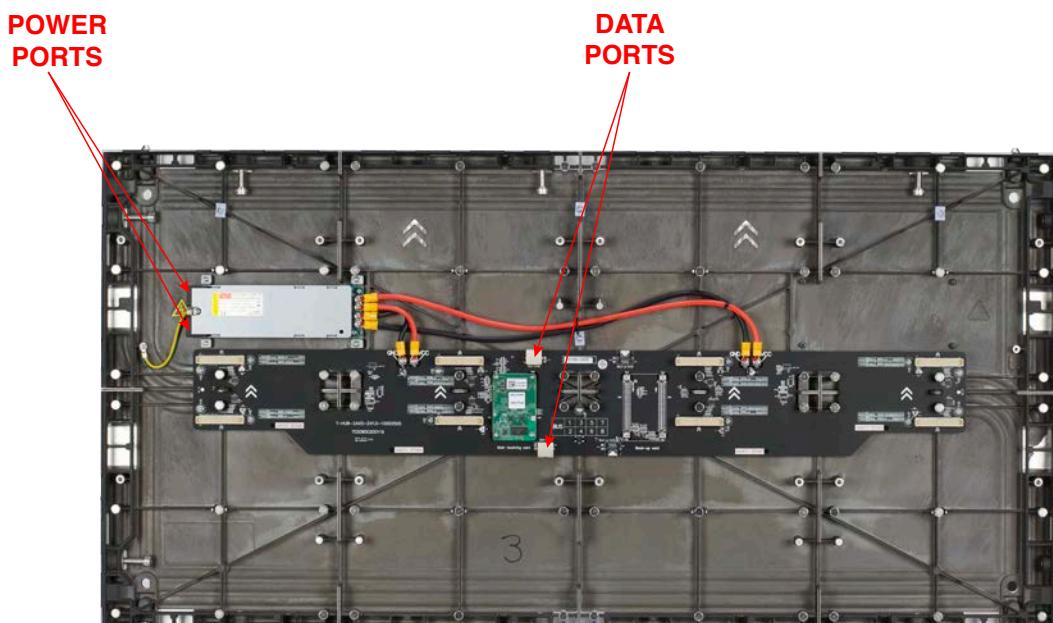
2. Use a philips screwdriver to install the framing strips around any exposed edges of the video panel assembly. The single inner hole at each end of the framing strip is used to attach the strip to the video panel, while the two outer holes are used for connectors that link neighboring trim strips together. Please note that there are two types of connectors: corner connectors and straight connectors.



3. Link the power and data ports of the video panels in the assembly together. Refer to the image below for power and data port locations, and be sure to route all cables through the openings on the edges of each video panel. Power in and power out can be connected to either of the power ports, and similarly data in and data out can be connected to either of the data ports.

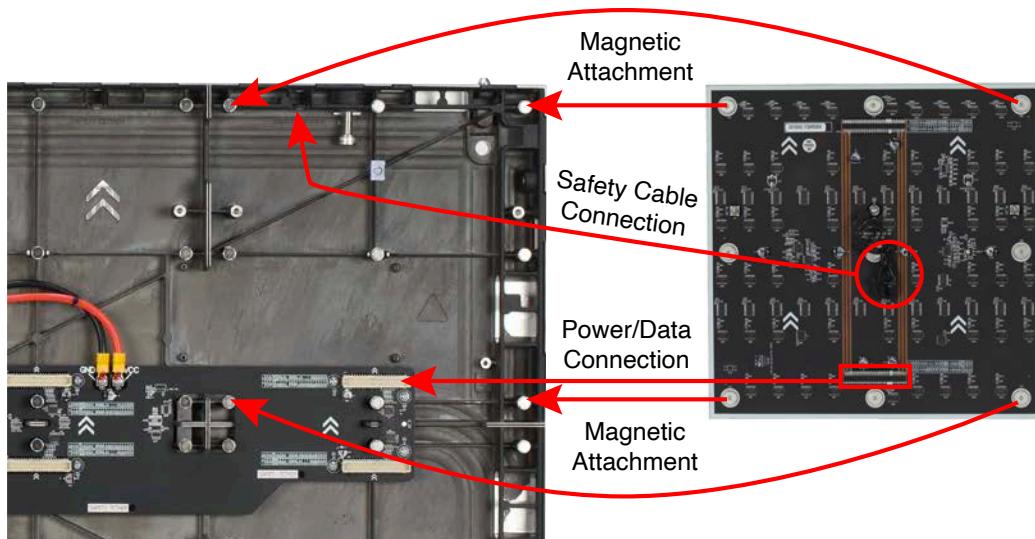
- **Power:** A maximum of four (4) panels can be linked together from the same power source when running on 110V power, or eight (8) panels when running on 220V power. If additional panels will be used, then the assembly will require multiple power sources.
- **Data:** A maximum of eight (8) panels can be linked together from a single controller port. If additional panels will be used, then the assembly will require multiple data ports.

Please refer to the **Wiring Diagrams** section of this manual for examples of possible wiring configurations.



## INSTALLATION: VIDEO PANEL ASSEMBLY

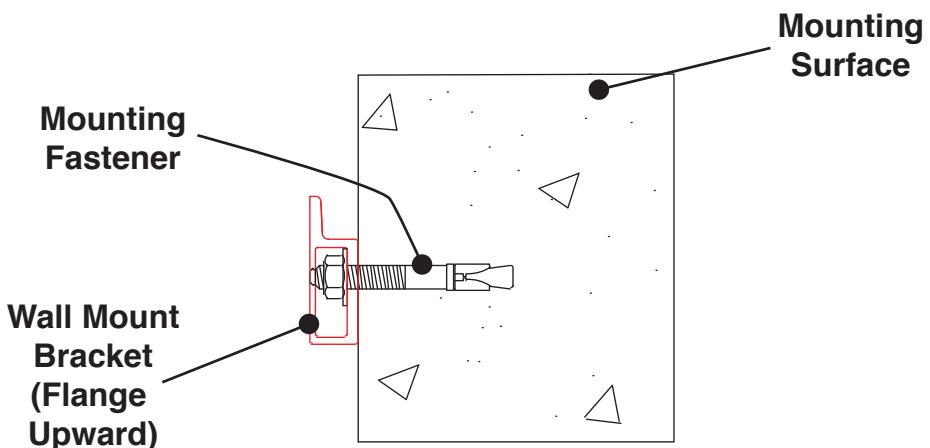
4. Install the video panel assembly via either wall mount or rigging bar, as detailed in the Wall Mount and Rigging Bar sections of this manual, then connect the panel assembly to external power and data signal. **Please note that the framing strips will block the openings on the sides of video panels along the edge of the assembly, so links to external power and data sources must be routed through openings located along the top or bottom edge.**
5. Lastly, install the LED modules. Orient each module with the directional arrows points upwards, then secure the module safety cable to the nearest safety cable point on the video panel. Safety cable points are located along the upper edge of the video panel for the top row of LED module, as well as along the central electronics board for the bottom row of LED modules. Gently lower the module to the video panel, and then allow the built-in magnets around the edges of the module to snap each module into place. Make sure that one of the two power/data connectors on the LED module mates securely to the matching connector on the video panel. Please note that magnet height is adjustable, as shown below, to ensure that each LED module is mounted in a level configuration.



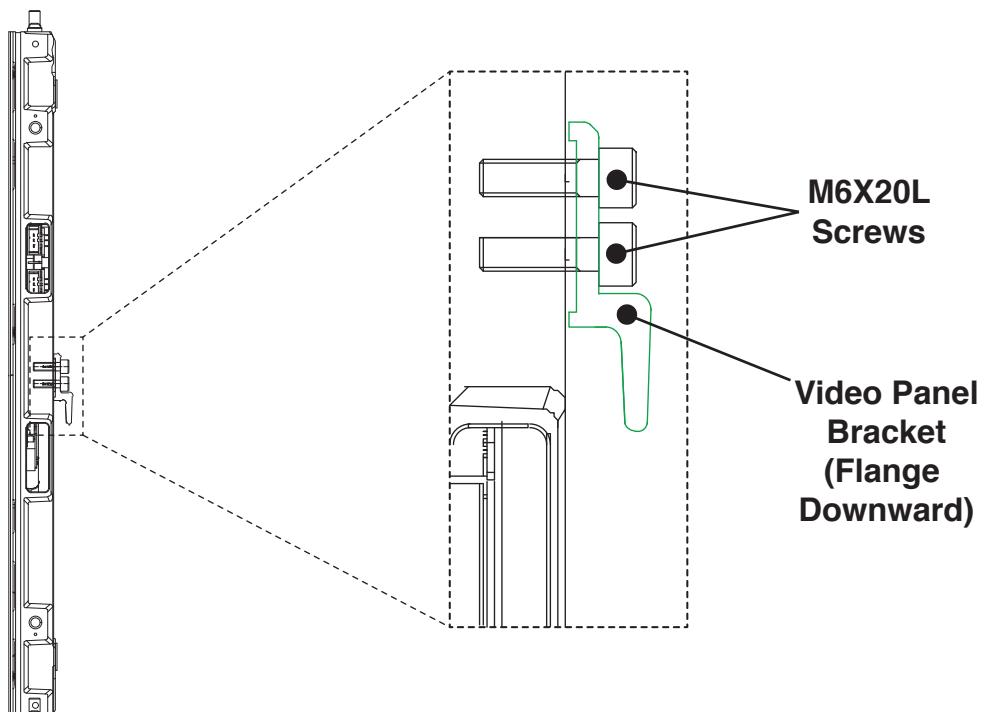
# INSTALLATION: WALL MOUNTING

The video panel is compatible with ADJ's **WMSWB1** Wall Mount Bracket (sold separately). Follow the steps below to wall mount your video panels. **A qualified technician or trained professional is required to fly the WMS1/WMS2 Video Panel assembly.**

1. Measure the locations of the mounting holes on the wall mount bracket, then drill starting holes in the mounting surface at the corresponding locations. Place the wall mount bracket on the wall, so that the side of the bracket with the smaller holes is in contact with the wall, and the flange is pointing upward. Insert the included fasteners and tighten to secure the wall mount bracket in place. Please note that at least 3 fasteners are needed to safely and securely install the wall mount bracket.

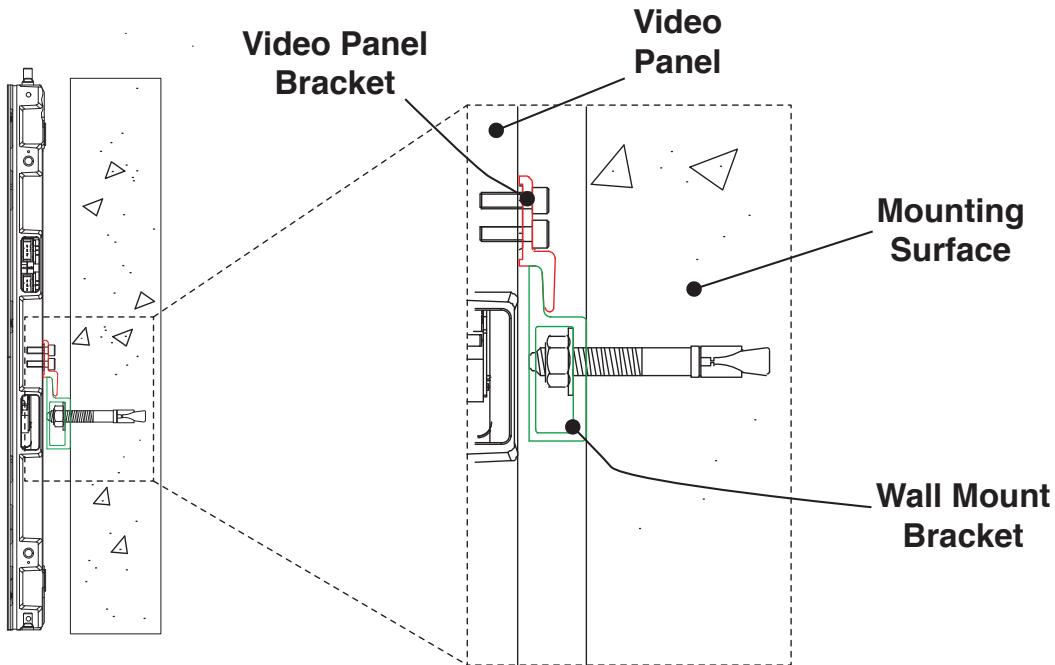


2. Align the video panel bracket with the holes on the back of the video panel, making sure that the video panel bracket is oriented such that the flange is pointing downward. Secure the bracket to the video panel with eight (8) M6 X 20L screws.

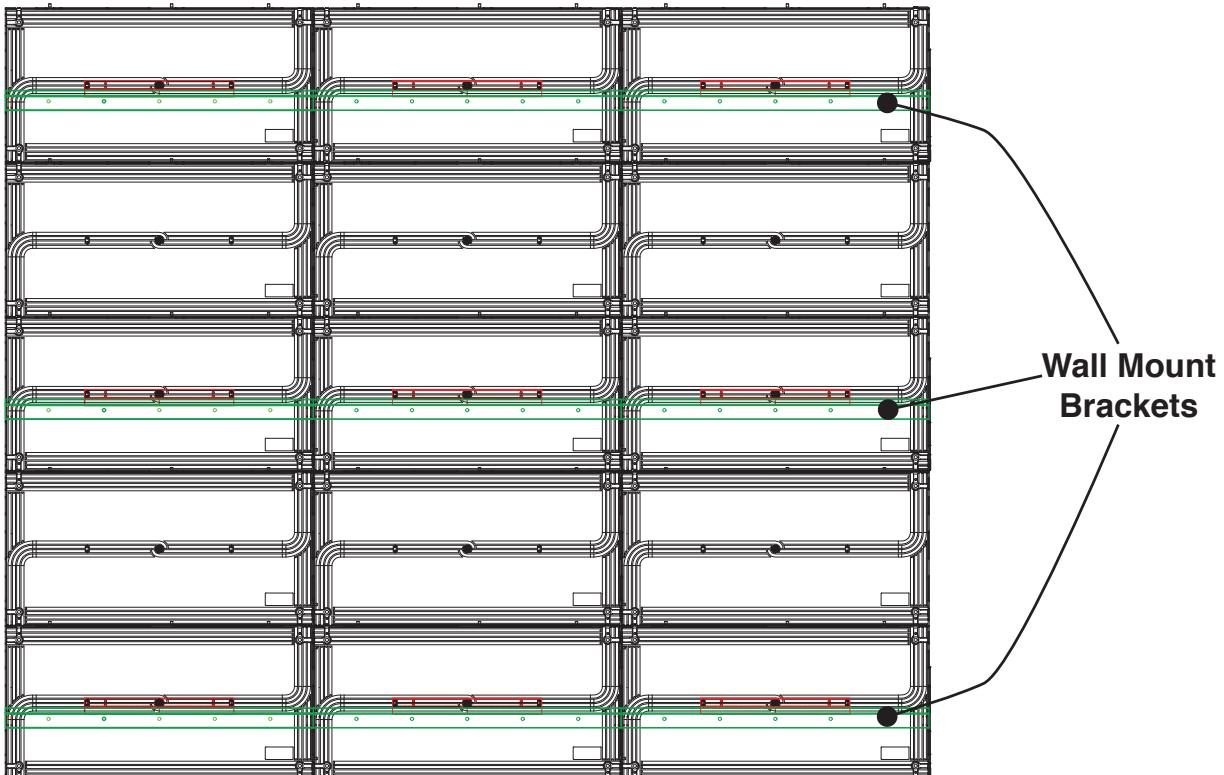


## INSTALLATION: WALL MOUNTING

3. Mount the video panel to the wall by hanging the downward-pointing flange of the video panel bracket into the upward-pointing flange of the wall mount bracket. Installation is now complete.



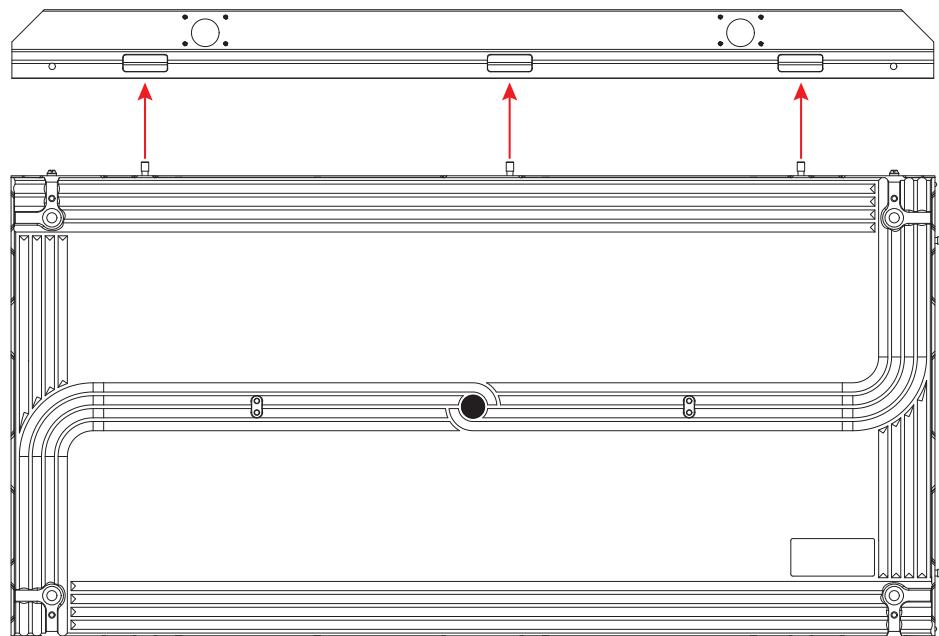
4. When mounting an assembly of multiple video panels, please note that wall mount brackets should be used for at least every other panel in a given vertical column. Brackets should extend across the full horizontal width of the panel assembly.



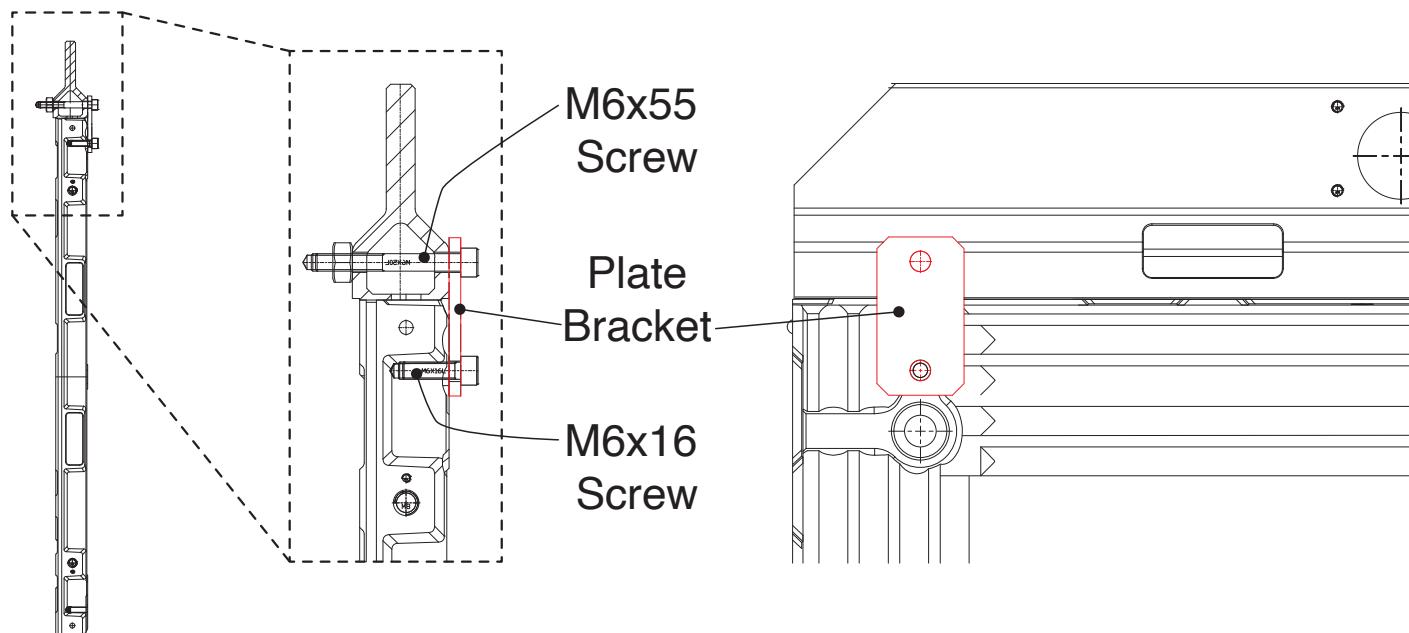
# INSTALLATION: RIGGING BAR

The video panel is compatible with ADJ's **WMSRB1** Rigging Bar (sold separately). To install the rigging bar, follow the steps below. **A qualified technician or trained professional is required to fly the VSRB1 Rigging Bar/Video Panel assembly.**

1. Screw the three mounting bolts on the top edge of the video panel with the matching mounting holes on the bottom of the rigging bar.

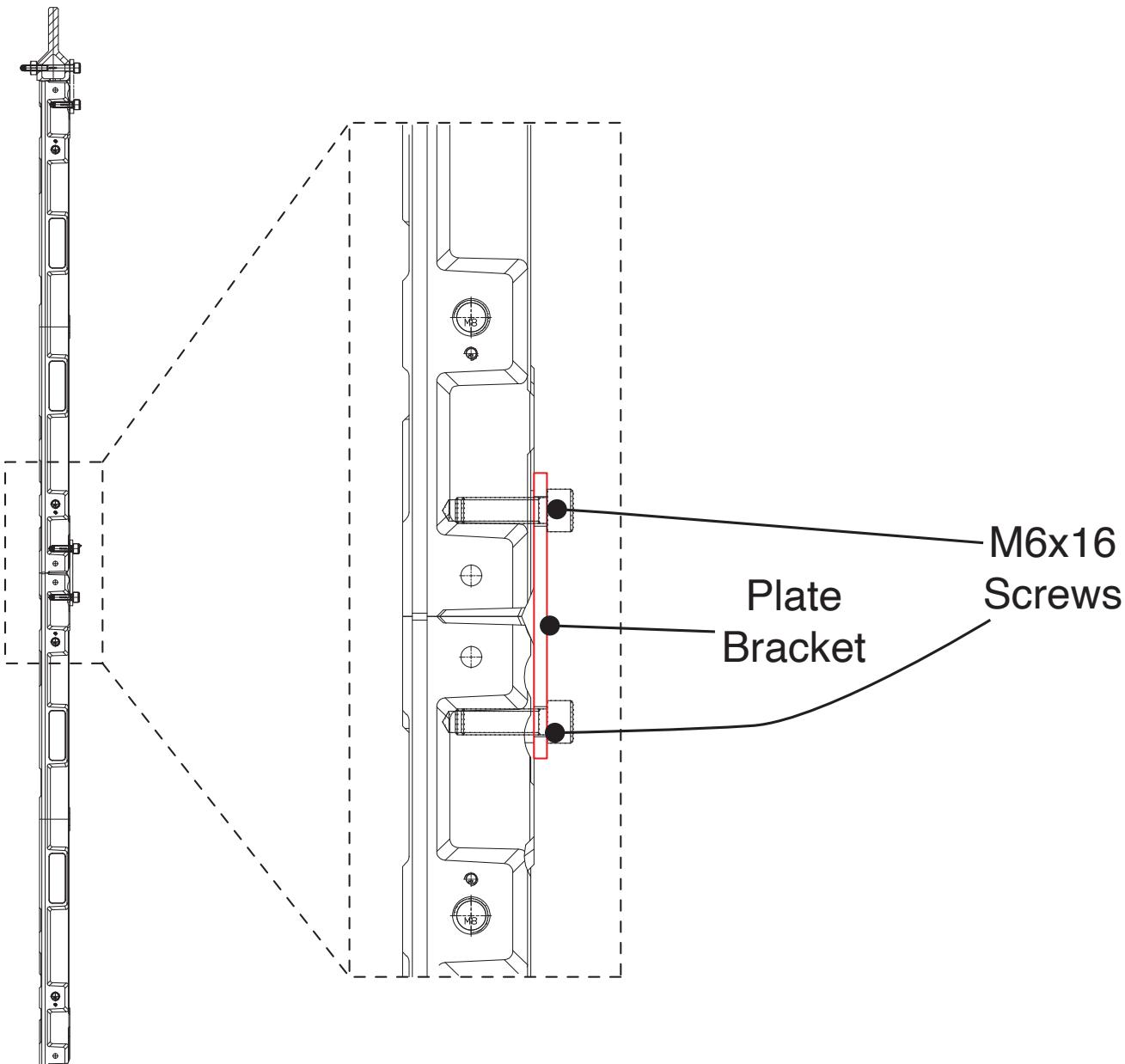


2. Place the panel on a secure, stable surface with the back facing up. Align one of the included plate brackets at the upper corner of the panel to connect the panel and the rigging bar. The upper hole of the plate bracket should line up with the hole on near the end of the rigging bar. Insert an M6x55 screw through the upper hole of the plate bracket and through the rigging bar, then secure in place with a matching nut on the other side of the rigging bar.



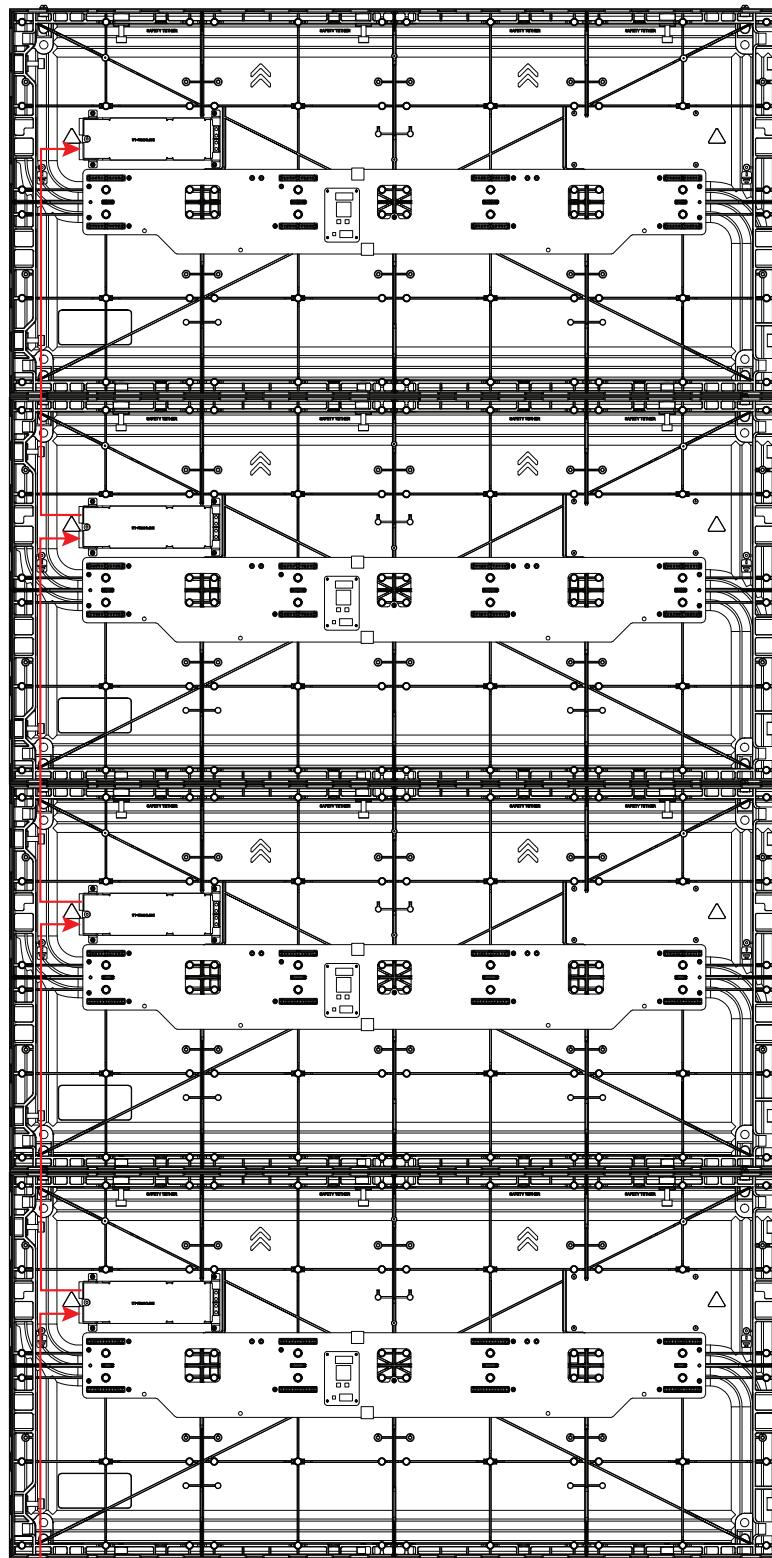
## INSTALLATION: RIGGING BAR

3. Align the bottom hole of the plate bracket with the small mounting hole on the corner of the video panel. Insert and M6x16 screw through the bottom hole of the plate bracket into the video panel, and tighten to secure in place. Refer to the image from Step 2.
4. Repeat steps 2 and 3 at the other upper corner of the video panel.
5. Additional video panels hanging from the bottom of another panel must also be secured using the mounting bolts along the top edges and mounting holes on the bottom edges of each panel. They should also be supported with a plate bracket and two (2) M6x16 screws at each corner.



# WIRING DIAGRAMS

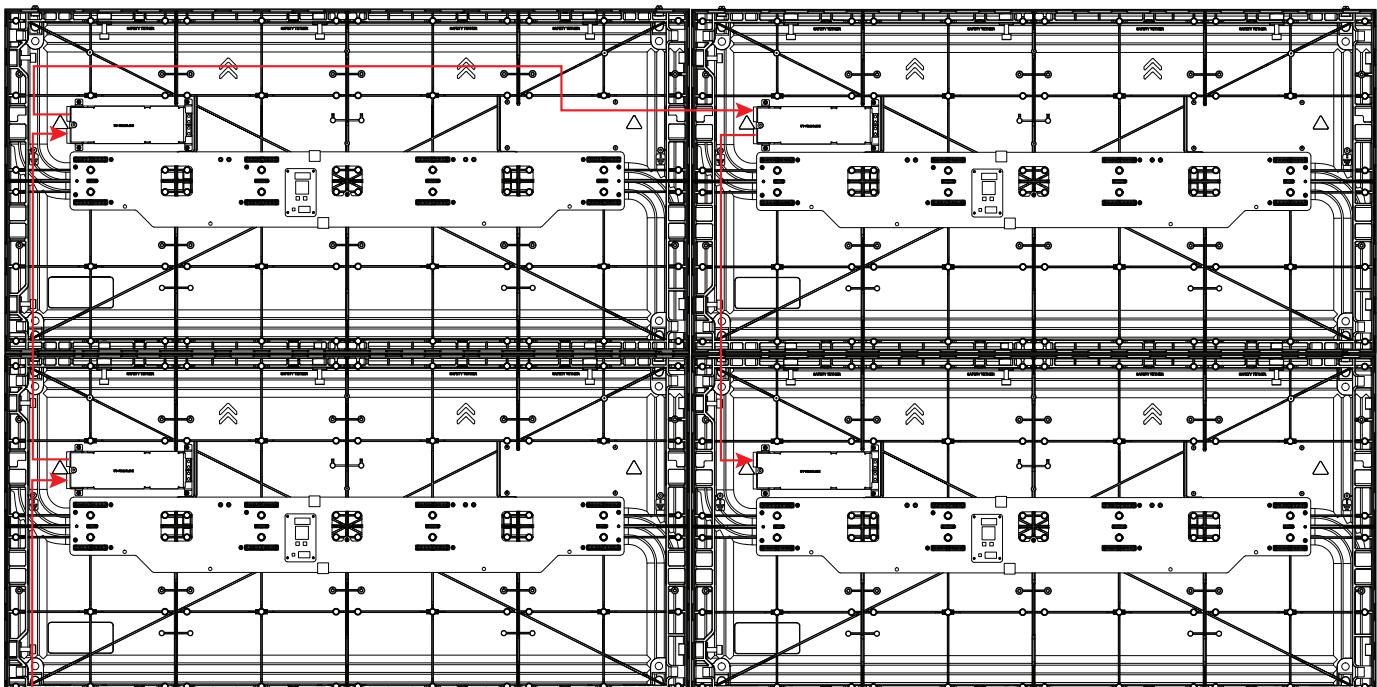
For a simple vertical stack, it is a straight forward approach to connect to external power through the top or bottom, then link the panels together through each panel's top and bottom pass-throughs. **Please note that the example below demonstrates one possible way of running power cables for a system running on 110V power (4 linked panels max).**



**EXTERNAL POWER SOURCE**

## WIRING DIAGRAMS

For a 2x2 assembly, external power can be connected through the top or bottom edge, then link the panels together in a U-shaped pattern (or an inverted U-shape as shown below) using bottom, top, and side pass-throughs. Please note that the example below demonstrates one possible way of running power cables for a system running on 110V power (4 linked panels max).



**EXTERNAL POWER SOURCE**

## WIRING DIAGRAMS

In large assemblies, panels located near the center of the assembly may not be readily accessible, and cannot be fed daisy chained linkages from other panels due to limitations on power and data linking. In these cases, an installer may choose to pass power and data cables through neighboring panels without actually connecting to those neighboring panels. Cables may be routed in this manner until reaching the desired panel, at which point they can make their first connection at that panel's power and data ports.

Consider the following example, which is illustrated on the next page. The assembly consists of 2 columns of 5 panels each, running off of 110V power. This limits the number of panels that can be linked to the same power source to a maximum of four (4) panels. The bottom 4 panels are linked to Power Source 1 in a 2x2 pattern with a U-shaped wiring path, and the top 4 panels are linked to Power Source 2 in the same manner. With framing strips fitted to the edges of the panel assembly, there is no way to route power directly to the two panels in the center row, and they cannot be power linked to the top 4 panels or the bottom 4 panels due to the limitation on power linking.

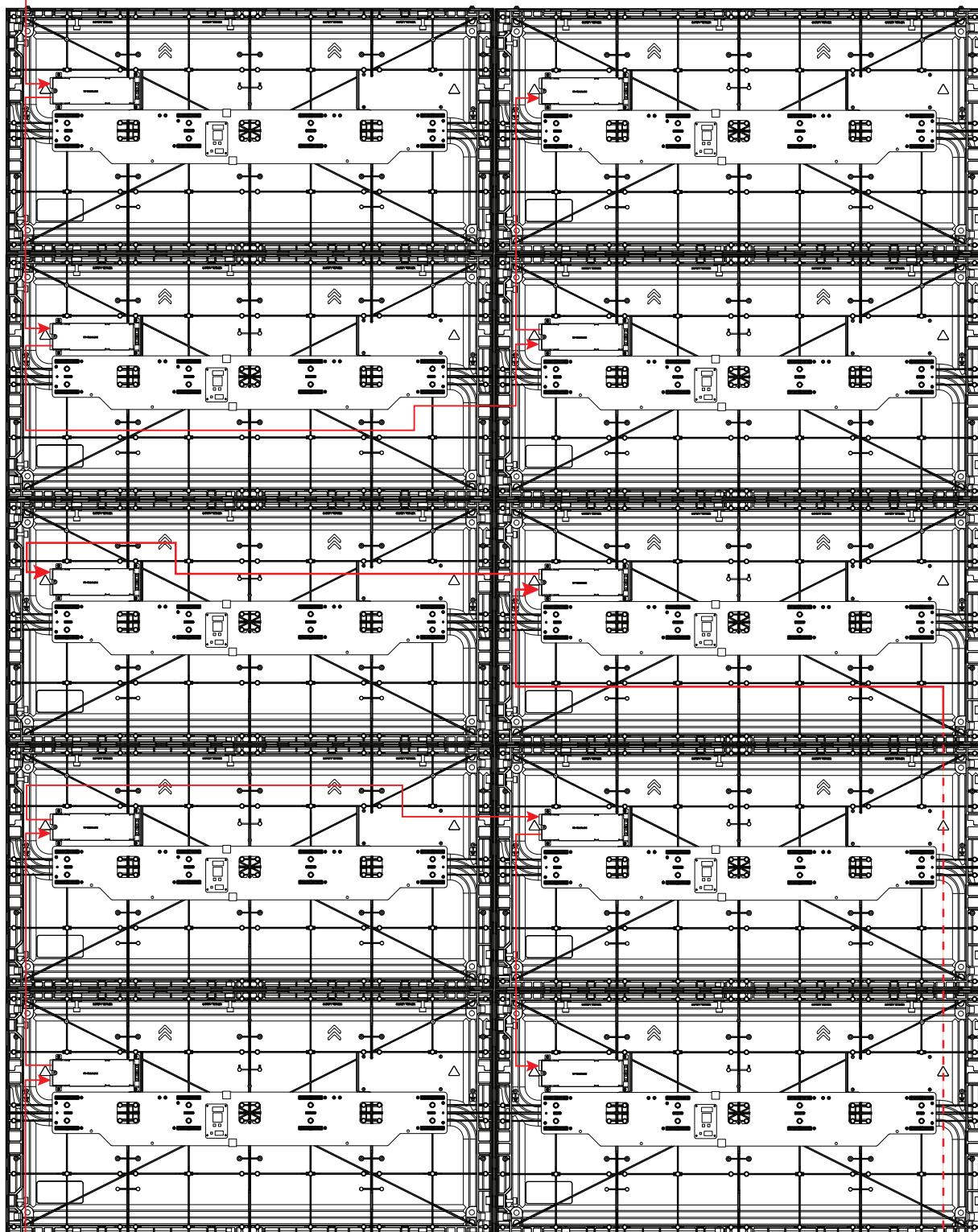
In the solution illustrated, the power cable from Power Source 3 enter the assembly through the bottom right panel. The power cable then passes through the bottom right panel, as well as the panel directly above it, without making any connections (denoted by the dashed line in the accompanying diagram). When the power cable enters the center panel in the right column, it makes its first connection. The center left panel can then be power linked via the center right panel.

Please note that this is not the only possible solution to wiring this panel configuration. This example is intended only as an example to illustrate the fact that power and/or data cables may be routed through panels without needing to connect to that panel's power or data ports, allowing for increased flexibility for wiring setups.

# WIRING DIAGRAMS

Please note: all power sources in the diagram below are running 110V.

## EXTERNAL POWER SOURCE 2



EXTERNAL POWER  
SOURCE 1

EXTERNAL POWER  
SOURCE 3

# TECHNICAL SPECIFICATIONS

## VIDEO PANEL

### Specifications:

- Pixel Pitch (mm): WMS1: 1.95mm; WMS2: 2.6mm
- Pixel Density (dot/m<sup>2</sup>): WMS1: 262,144; WMS2: 147,456
- LED sealing Type: WMS1: SMD1212 Kinglight Cooper; WMS2: SMD1515 Kinglight Cooper
- Module Size (mm x mm): 250 x 250
- Module Resolution (PX x PX): WMS1: 128 x 128; WMS2: 96 x 96
- Panel Resolution (PX x PX): WMS1: 512 x 256 pixels (horizontally) or 256 x 512 (vertically); WMS2: 384 x 192 pixels (horizontally) or 192 x 384 (vertically)
- Average Life (Hours): 50000H

### Features:

- Installation Method: Hang or Wall Mount
- Maintenance: Front Service
- Configuration: Horizontal (wall mount or hang); Vertical (wall mount only)

### Optical Ratings:

- Brightness (cd/m<sup>2</sup>): WMS1: 700 NITS; WMS2: 800 NITS
- Horizontal Viewing Angle (Deg): 160°
- Vertical Viewing Angle (Deg): 140°
- Grey Scale (Bit): WMS1: ≥14, DP32655; WMS2: ≥14, CFD435
- Refresh Rate (Hz): 3840Hz

### Power Supply:

- Input Voltage (V): 100-240VAC
- Max Power Dissipation (W/m<sup>2</sup>): WMS1: 370; WMS2: 350
- Average Power consumption (W/m<sup>2</sup>): 140

### Control System:

- Receiving Card: Novastar A8s-N

### Environmental:

- Working Environment: Indoor
- Waterproof Level: IP20
- Working Temperature: -20 °C ~ +40 °C, (-4 °F ~ 104 °F)
- Work humidity (RH): 10%~90%
- Storage temperature range: -40 °C ~ +80 °C, (-40 °F ~ 176 °F)
- Operation humidity (RH): 10%~90%

### Weight / Dimensions:

- Cabinet Size (mm x mm): 1.3" x 39.4" x 19.7" / 32 x 1000 x 500mm
- Cabinet Weight (Kg): 21 Lbs / 9.5Kg
- Cabinet Thickness (mm): 1.3" / 33mm

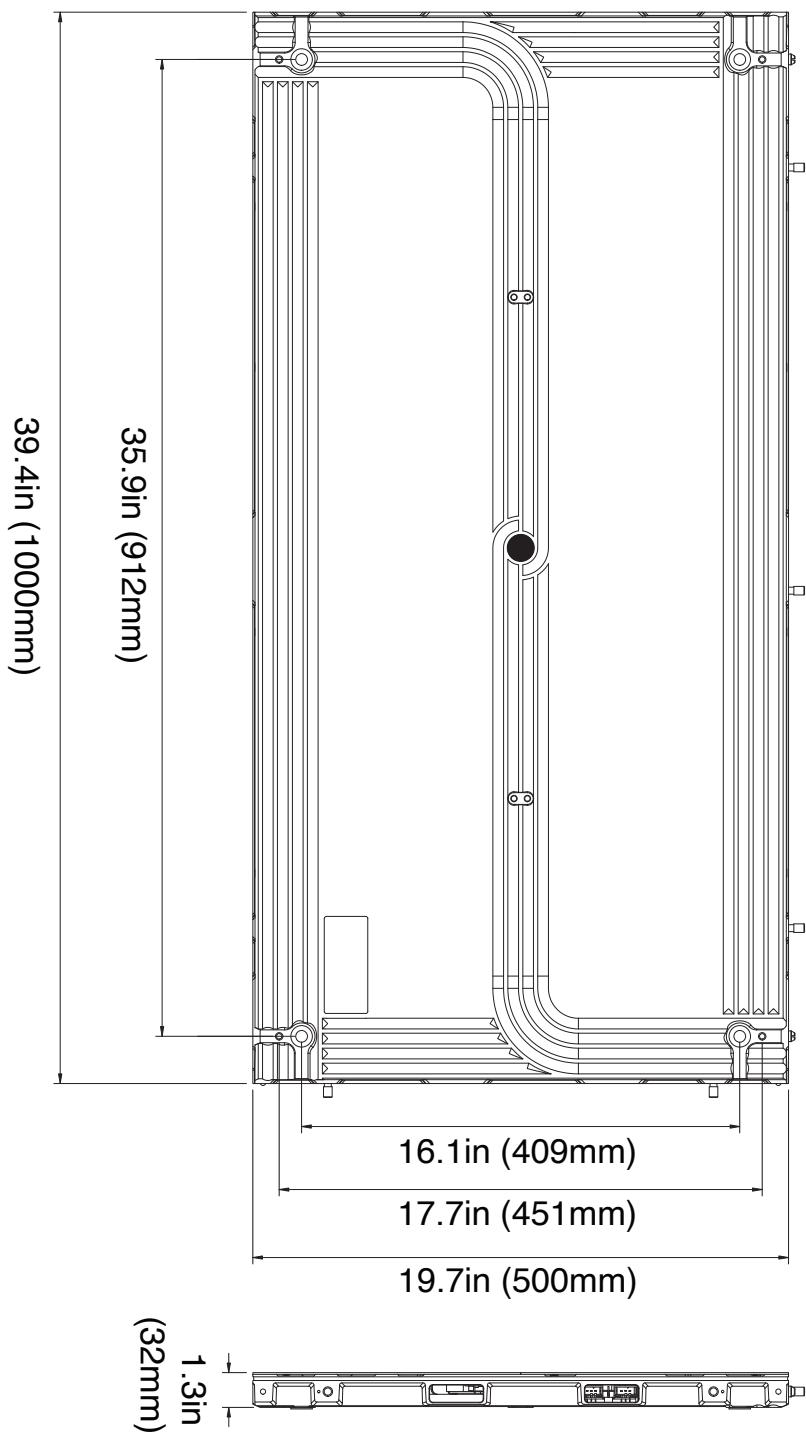
### Approvals:

- Certificates: ETL

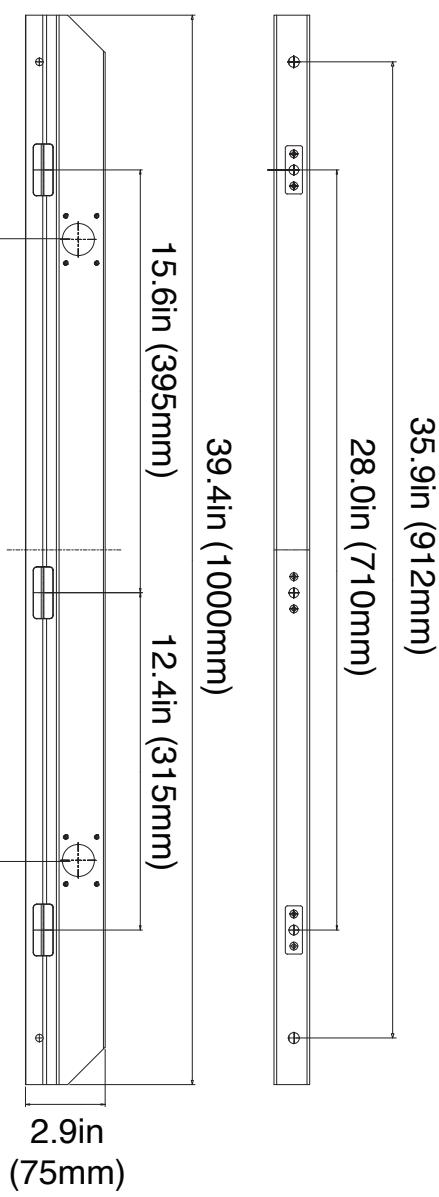


# DIMENSIONAL DRAWINGS

## VIDEO PANEL

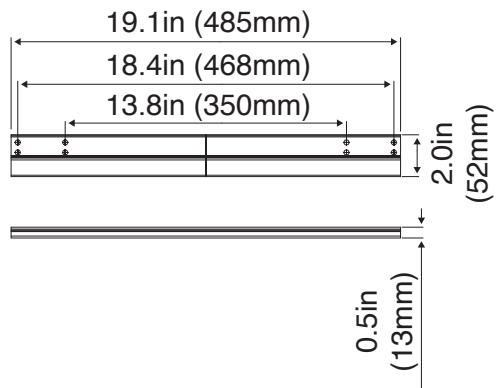


## RIGGING BAR

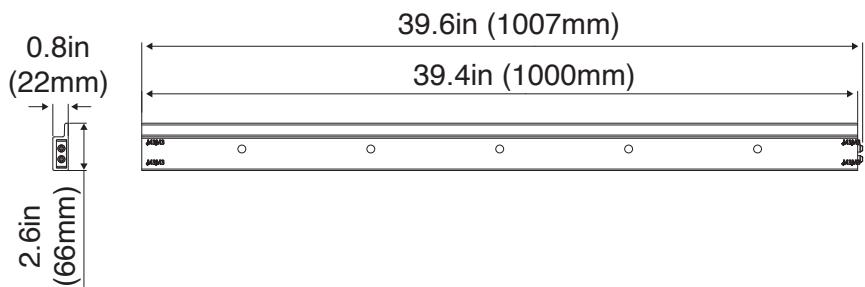


# DIMENSIONAL DRAWINGS

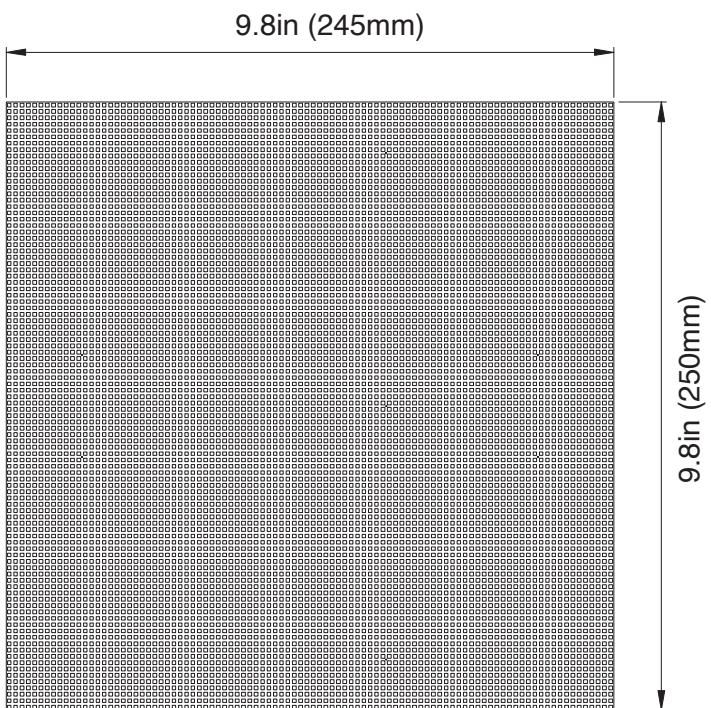
## VIDEO PANEL BRACKET



## WALL MOUNT BRACKET



## LED MODULE



## OPTIONAL COMPONENTS AND ACCESSORIES

SKU (US)	SKU (EU)	DESCRIPTION
EVSVAC	1226300171	EVSVAC - Vacuum Tool for Module Removal
WMS015	1226300169	WMSRB1 - Free Hang, 1-meter Rigging Bar
WMS028	1226300168	WMSWB1 - 1-meter, Wall Mount Bracket
WMS275	TBA	WMSTCA - Trim Corner Adapter
WMS262	TBA	WMSTTA - Trim to Trim Adapter

